

## EAST Search History

S38	74	("20020102829"   "20020111003"   "20020171177"   "20030045047"   "20030098470"   "20030102566"   "20030141885"   "20030151167"   "20030180974"   "20030181003"   "20030186496"   "20040014255"   "20040018709"   "4143456"   "4218701"   "4843036"   "4883730"   "5173220"   "5259793"   "5264061"   "5278442"   "5336931"   "5484314"   "5574310"   "5577319"   "5650593"   "5705117"   "5714800"   "5714802"   "5719440"   "5734201"   "5767443"   "5793116"   "5834830"   "5866949"   "5920118"   "5965933"   "5977640"   "5994166"   "5999413"   "6013946"   "6091140"   "6124407"   "6144102"   "6222263"   "6239013"   "6249052"   "6251488"   "6252298"   "6259962"   "6268584"   "6300165"   "6322903"   "6333564"   "6372552"   "6380557"   "6391251"   "6448664"   "6468891"   "6479887"   "6489183"   "6500746"   "6522019"   "6524346"   "6529027"   "6531335"   "6537842"   "6544902"   "6611053"   "6630730"   "6632732"   "6634100"   "6731010"   "6818474").PN. OR ("7041532").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/04 15:20
S39	2146	(bga or ball adj grid adj array) and slot	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/04 15:36
S40	2	(bga or ball adj grid adj array) and isolation near5 slot	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/04 15:22
S41	632	(bga or ball adj grid adj array) and slot and wire and trace	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/06 11:18
S42	20	("20010037892"   "20020053736"   "20020172024"   "6210992"   "6265766"   "6268649"   "6294825"   "6329220"   "6339253"   "6372552"   "6376277"   "6414391"   "6461897"   "6462274"   "6518654"   "6563205"   "6576496"   "6683374"   "6707143"   "6710455").PN. OR ("6903464").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/04 15:29
S43	17	("4951123"   "5155067"   "5677566"   "5696033"   "5736456"   "5739585"   "5789803"   "5817535"   "5849635"   "5895967").PN. OR ("6372552").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/04 15:35

## EAST Search History

S44	58001	(bga or ball adj grid adj array) and flip adj chip wire and trace	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/04 15:38
S45	2208	(bga or ball adj grid adj array) and flip adj chip and wire and trace	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/04 15:42
S46	294	(bga or ball adj grid adj array) and voltage near3 plane	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/04 15:38
S47	1370	(bga or ball adj grid adj array) and flip adj chip and wire and trace and encapsulat\$4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/04 15:47
S48	23	(bga or ball adj grid adj array) and isolate near5 noise	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/04 15:58
S49	1694	(bga or ball adj grid adj array) and wire and trace and encapsulat\$4 and (chip or die) and (dielectric or insulati\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/04 15:48
S50	3721	(bga or ball adj grid adj array) and isolat\$4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/04 16:57
S51	11	("5557502"   "5578940"   "5809263"   "5841715"   "6016472"   "6064116"   "6255852"   "6295220"   "6359234"   "6414396"   "6532162").PN. OR ("6909174").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/04 16:01
S52	11	("5578940"   "5809263"   "5841715"   "6016472"   "6064116"   "6255852"   "6295220"   "6414396").PN. OR ("6532162").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/04 16:02
S53	24	("4392151"   "4685081"   "4862322"   "4878108"   "5091251"   "5182852"   "5311057"   "5550711"   "5699232"   "5731962"   "5760465"   "5780931"   "5814882"   "5898212"   "5926376"   "5963433"   "6057594"   "6091251"   "6130477"   "6134776"   "6175151"   "6334971"   "6440772"   "6703707").PN. OR ("6949824").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/04 16:32
S54	1613	257/698.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/04 16:33

## EAST Search History

S55	7	("5376588"   "5592736"   "5717252"   "5998241"   "6051450"   "6144102"   "6333564").PN. OR ("6818989").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/04 16:42
S56	20	("4551789"   "5214845"   "5278524"   "5696667"   "5847451"   "5854534"   "5859474"   "5886409"   "5903050"   "5952726"   "6048753"   "6064113"   "6072126"   "6079620"   "6096980"   "6103548").PN. OR ("6448640").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/04 16:45
S57	15	("20010006258"   "20030001288"   "20030006496"   "20030197271"   "5998860"   "6013948"   "6020629"   "6093969"   "6180881"   "6294825"   "6331453"   "6448640"   "6507107"   "6583502").PN. OR ("6836007").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/04 16:45
S58	4960	(bga or ball adj grid adj array) and (groove or channel or duct or path or hole) near5 (conductive or metal)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/04 16:58
S59	5842	(bga or ball adj grid adj array) and (groove or channel or duct or path or hole or slot or open\$3) near5 (conductive or metal)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/04 16:59
S60	1881	(bga or ball adj grid adj array) and (groove or channel or duct or path or hole or slot or open\$3) near5 (conductive or metal) and (chip or die) and encapsul\$4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/04 17:13
S61	1992	(bga or ball adj grid adj array) and (groove or channel or duct or path or hole or slot or open\$4) near5 (conductive or metal) and (chip or die) and encapsul\$4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/04 17:13
S62	26	("4332537"   "4868349"   "4954301"   "5285104"   "5304512"   "5550711"   "5609889"   "5682673"   "5723156"   "5766972"   "5776512"   "5824569"   "5824950"   "5841187"   "5853771"   "5898212"   "5898575"   "5998877"   "6036908"   "6063646"   "6200824"   "6214645"   "6268644"   "6274405").PN. OR ("6576496").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/04 17:15
S63	7	("4612160"   "5866949"   "6013946"   "6144102"   "6201299"   "6221697"   "6252298").PN. OR ("6395581").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/04 17:37
S64	54	("4996587"   "5583375"   "5650593"   "5674785"   "5677566"   "5866949"   "6013946").PN. OR ("6252298").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/04 17:38

## EAST Search History

S65	5	("4562092"   "4599636"   "5866949"   "6013946"   "6252298").PN. OR ("6979887").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/04 17:40
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## EAST Search History

S66	151	("20010038144"   "20020016023"   "20020048843"   "20020050654"   "20020052063"   "20030029633"   "20030106709"   "20030109083"   "3672046"   "4285780"   "4769344"   "4777520"   "4855807"   "4866506"   "4882212"   "4887149"   "5107328"   "5128831"   "5138434"   "5147821"   "5191174"   "5195023"   "5197183"   "5208467"   "5296738"   "5309026"   "5314842"   "5363280"   "5365655"   "5474958"   "5527743"   "5578261"   "5593927"   "5596231"   "5606204"   "5609889"   "5612576"   "5635220"   "5665281"   "5665296"   "5677566"   "5696033"   "5710071"   "5721450"   "5728600"   "5739585"   "5750423"   "5766649"   "5767446"   "5773322"   "5793613"   "5796159"   "5815000"   "5842275"   "5851845"   "5866953"   "5891753"   "5893726"   "5898224"   "5917234"   "5920768"   "5928595"   "5933713"   "5938956"   "5945130"   "5946553"   "5958100"   "5964030"   "5986209"   "5989941"   "5990566"   "5994784"   "5998243"   "6000924"   "6008070"   "6013946"   "6020629"   "6025728"   "6028365"   "6046496"   "6048744"   "6048755"   "6049125"   "6054755"   "6066514"   "6071758"   "6072236"   "6075288"   "6089920"   "6094058"   "6097087"   "6100598"   "6103547"   "6107122"   "6107680"   "6114189"   "6117382"   "6124634"   "6126428"   "6143581"   "6150717"   "6159764"   "6168970"   "6172419"   "6175159"   "6184465"   "6191472"   "6198172"   "6208519"   "6210992"   "6215175"   "6228548"   "6228687"   "6229202"   "6235994"   "6242802"   "6246108"   "6252298"   "6258623"   "6258624"   "6259153"   "6262480"). PN. OR ("6277671"   "6284571"   "6291894"   "6291895"   "6294839"   "6300165"   "6303981"   "6303985"   "6309916"   "6310390"   "6314639"   "6316285"   "6326244"   "6326687"   "6326697"   "6326698"   "6329220"   "6329603"   "6331221"   "6331453"   "6332766"   "6338813"   "6403009"   "6413801"   "6472252"   "6483044"   "D394844"   "D402638"   "RE36469"). PN. OR ("6979595").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/04 17:42
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## EAST Search History

S67	47	("5041395"   "6143581"   "6146924"). PN. OR ("6210992").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/04 17:44
S68	20	("4996587"   "5159434"   "5428247"   "5674785"   "5677566"   "5864470"   "5894107"   "5986346"   "5999413"   "6013946"   "6060768"   "6104089"   "6122171"   "6218202"   "6221682"   "6252298"   "6265768"   "6271586"   "6291884"   "6331451").PN. OR ("6855575").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/04 17:48
S69	27	("5148265"   "5821605"   "5844168"   "5886399"   "5889333"   "6013946"   "6028356"   "6054773").PN. OR ("6144102").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/04 17:51
S70	67	("5523622"   "5572405"   "5598321"   "5705851"   "5719440"   "5724232"   "5729432"   "5793118"   "5818698"   "5854507"   "5866953"   "5903052"   "5936305"   "5959356").PN. OR ("6122171").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/04 17:56
S71	48	("5021300"   "5248895"   "5289346"   "5300812"   "5352851"   "5359768"   "5442231"   "5559369"   "5650593"   "5661086"   "5677566"   "5723907"   "5726079"   "5739585"   "5817535"   "5857767"   "5972736"   "5985697"   "5990550"   "5998241"   "5998860"   "5998865"   "5999415"   "6008074"   "6020637"   "6048755"   "6107683"   "6122171"   "6198162"   "6214641"   "6215180"   "6225695"   "6229227"   "6249041"   "6255140"   "6271586"   "6284571"   "6300165"   "6326687"   "6343019"   "6399425"   "6461894"   "6498052"   "6507114"   "6507116"   "6518098"   "6528890"   "6586280"). PN. OR ("6939739").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/04 17:56
S72	1	"20030036241".pn. and thermal near3 mask	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/05 10:36
S73	1	"20030036241".pn. and thermal and mask	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/05 11:05
S74	2	("4789560").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 11:05

## EAST Search History

S75	29	("3549411"   "3652324"   "3911168"   "4001465"   "4230745"   "4254161"   "4278705"   "4333964"   "4435447"   "4473598"   "4583281"   "4597159").PN. OR ("4789560").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/05 11:06
S76	2	("6066527").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/05 11:06
S77	533	(bga or ball adj grid adj array) and micron.as. and trace and wire	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/06 11:57
S78	17	("4951123"   "5155067"   "5677566"   "5696033"   "5736456"   "5739585"   "5789803"   "5817535"   "5849635"   "5895967").PN. OR ("6372552").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/06 11:21
S79	20	("20010037892"   "20020053736"   "20020172024"   "6210992"   "6265766"   "6268649"   "6294825"   "6329220"   "6339253"   "6372552"   "6376277"   "6414391"   "6461897"   "6462274"   "6518654"   "6563205"   "6576496"   "6683374"   "6707143"   "6710455").PN. OR ("6903464").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/06 11:22
S80	8	("5923090"   "5949135"   "6057598"   "6448636"   "6462420"   "6507115"   "6555917").PN. OR ("6683374").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/06 11:23
S81	44	("4883773"   "5148265"   "5258330"   "5384689"   "5474958"   "5477611"   "5519936"   "5533256"   "5536909"   "5633785"   "5650593"   "5684330"   "5753974"   "5766987"   "5824177"   "5858815"   "5863813"   "5866949"   "5950070"   "5989982"   "5990545"   "6025251"   "6028354"   "6043109"   "6072154"   "6144102"   "6204091"   "6252298").PN. OR ("6462274").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/06 11:24
S82	47	("5041395"   "6143581"   "6146924").PN. OR ("6210992").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/06 11:26
S83	14	("20020072153"   "5254501"   "6048755"   "6122171"   "6173490"   "6177723"   "6184465"   "6210992"   "6229204"   "6268650"   "6284569"   "6287503"   "6294825"   "6439869").PN. OR ("6720666").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/06 11:27

## EAST Search History

S84	19	("20020072153"   "20020172024"   "20030042617"   "5254501"   "5461255"   "6048755"   "6122171"   "6173490"   "6177723"   "6184465"   "6210992"   "6229204"   "6268650"   "6284569"   "6287503"   "6294825"   "6439869"   "6469399"   "6486536"). PN. OR ("6692987").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/06 11:31
S85	2	("6756251").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/06 11:31
S86	91	("20010167092"   "20020164838"   "20030164540"   "20030164541"   "20030164543"   "20030164548"   "20030164551"   "20030166312"   "4807021"   "5347159"   "5366794"   "5385869"   "5386341"   "5397921"   "5409865"   "5422205"   "5448511"   "5646446"   "5663530"   "5668405"   "5674785"   "5697148"   "5710071"   "5719449"   "5721151"   "5739585"   "5747982"   "5752182"   "5758413"   "5798285"   "5805422"   "5818113"   "5834338"   "5834366"   "5835355"   "5843808"   "5844168"   "5866953"   "5886408"   "5891753"   "5898224"   "5973404"   "5977640"   "5982030"   "5984691"   "5991161"   "6008543"   "6011694"   "6024584"   "6027346"   "6028365"   "6040630"   "6050832"   "6057178"   "6072233"   "6074897"   "6075710"   "6079991"   "6093035"   "6116921"   "6124631"   "6127736"   "6137062"   "6137164"   "6137183"   "6157541"   "6165885"   "6172422"   "6179598"   "6208521"   "6212768"   "6214156"   "6218202"   "6219911"   "6221763"   "6225688"   "6229711"   "6262895"   "6291775"   "6294455"   "6300679"   "6310288"   "6323060"   "6413102"   "6429516"   "6432737"   "6489687"   "6492737"   "6518677"   "6552910").PN. OR ("6756251").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/06 11:31
S87	74	(bga or ball adj grid adj array) and wire near3 slot	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/06 12:21
S88	3	("6692987").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/06 12:03



## EAST Search History

S89	4688	(bga or ball adj grid adj array) and cavity	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/06 12:23
S90	3280	(bga or ball adj grid adj array) and cavity and wire	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/06 13:42
S91	1956	(bga or ball adj grid adj array) and cavity and wire and (trace or land)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/07/06 15:56
S92	3	("6692987").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/06 16:04
S93	2	("6897092").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/06 16:04
S94	63	("0511935"   "20020033524"   "3774232"   "3942245"   "4878991"   "5023202"   "5075760"   "5111935"   "5170328"   "5173766"   "5196725"   "5216278"   "5286679"   "5359222"   "5472085"   "5474957"   "5545922"   "5585600"   "5661086"   "5677566"   "5726491"   "5756377"   "5789820"   "5796586"   "5841194"   "5844168"   "5847445"   "5898214"   "5925926"   "5945834"   "5951804"   "5952711"   "5977617"   "5980683"   "6013946"   "6036173"   "6057174"   "6087202"   "6091140"   "6097098"   "6111324"   "6118183"   "6144102"   "6179127"   "6199743"   "6240632"   "6249046"   "6256762"   "6258621"   "6268646"   "6284569"   "6303219"   "6306687"   "6319354"   "6323541"   "6353268"   "6362637"   "6379745"   "6426548"   "6455354"   "6465876"   "6670696"). PN. OR ("6897092").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/06 16:05
S95	49	("5866949"   "6013946").PN. OR ("6091140").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/06 16:06

## EAST Search History

S96	36	("4704304"   "5216278"   "5420460"   "5475918"   "5504373"   "5663593"   "5677566"   "5696033"   "5715143"   "5723907"   "5789803"   "5817535"   "5952611"   "5953216"   "5998860"   "6013535"   "6013946"   "6017776"   "6021563"   "6023666"   "6048755"   "6060339"   "6084311"   "6091136"   "6091140"   "6098278"   "6110805"   "6111324"   "6201299"   "6218731"   "6265766"   "6301121"   "6303997"   "6326700"   "6331451"   "6489218"). PN. OR ("6779258").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/07/06 16:12
S97	2	("20020008307").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/07/06 16:12